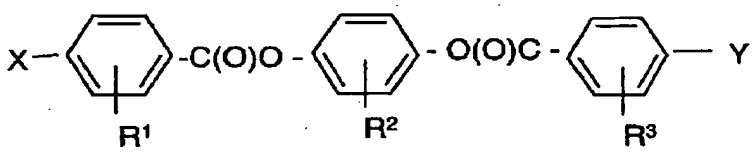
Amendments to the Claims:

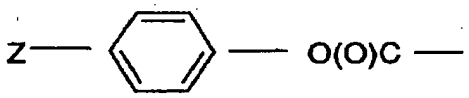
This listing of claims will replace all prior versions, and listings, of claims in the application:

1-173. (Canceled).

174. (New) Mesogens having the following formula:



wherein X and Y are spacer groups optionally further consisting essentially of terminal functionalities, polymerizable groups, or combinations thereof, one or more of X or Y having the following general structure:



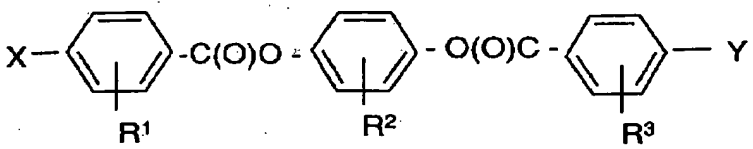
wherein Z is spacer group optionally further consisting essentially of terminal functionalities, polymerizable groups, and combinations thereof;

R^2 is selected from the group consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups; and

R^1 and R^3 are selected from groups less bulky than R^2.

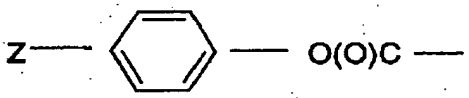
175. (New) The mesogens of claim 174 wherein said terminal functionalities are independently selected from the group consisting of hydroxyl groups, amino groups and sulfhydryl groups.

176. (New) Mesogens having the following formula:



wherein

X and Y independently are selected from the group consisting of amino groups, polymerizable groups having polymerizable unsaturated carbon-carbon bond, and combinations thereof, and groups having the following structure:



wherein Z is selected from the group consisting of amino groups, polymerizable groups having polymerizable unsaturated carbon-carbon bond, and combinations thereof;

provided that when either X or Y is polymerizable group, the other of X or Y is amino group and, when both X and Y are amino group, one or more of X or Y further consists essentially of spacer group selected from the group consisting of H-$(CH_2)_n$-O- groups, Cl$(CH_2)_n$-O- groups, Br$(CH_2)_n$-O- groups, I$(CH_2)_n$-O-, wherein n is from about 2 to about 12 wherein the CH_2 groups independently are optionally substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms separate said oxygen or said ester group; and,

R^2 is selected from the group consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups.

177. (New) The mesogens of claim 176 wherein one or more of X, Y, or Z is polymerizable group selected from the group consisting of acryloyloxy alkoxy groups

and methacryloyloxy alkoxy groups having an alkyl moiety having from 2 to 12 carbon atoms.

178. (New) The mesogens of claim 177 wherein said alkyl moiety consists essentially of a total of from 2 to 12 carbon atoms wherein CH_2 groups optionally are substituted by groups selected from the group consisting of oxygen, sulfur, and ester groups; provided that two or more carbon atoms separate said oxygen from said ester groups.

179. (New) The mesogens of claim 178 wherein said alkyl moiety consists essentially of a total of from 2 to 9 carbon atoms.

180. (New) The mesogens of claim 178 wherein said alkyl moiety consists essentially of a total of from 2 to 6 carbon atoms.

181. (New) The mesogens of claim 176 wherein R^2 is selected from the group consisting of t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

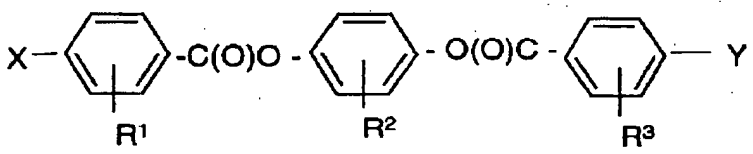
182. (New) The mesogens of claim 178 wherein R^2 is selected from the group consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

183. (New) The mesogens of claim 181 wherein R and R^3 are selected from the group consisting of hydrogen and a methyl group.

184. (New) The mesogens of claim 176 wherein one or more of X, Y, or Z further consists essentially of spacer group.

185. (New) The mesogens of claim 184 wherein one or more of X, Y, or Z further consists essentially of functionalities independently selected from the group consisting of hydroxyl groups and sulfhydryl groups.

186. (New) Mesogens having the following formula:



wherein

X and Y independently are selected from the group consisting of amino groups, polymerizable groups, and combinations thereof, provided that when X is polymerizable group, Y is amino group;

R^2 is selected from the group consisting of t-butyl groups, isopropyl groups, and secondary butyl groups; and

R^1 and R^3 are selected from groups less bulky than R^2.

187. (New) The mesogens of claim 186 wherein said polymerizable groups have polymerizable unsaturated carbon-carbon bond.

188. (New) The mesogens of claim 186 wherein said polymerizable groups are selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy alkoxy groups having alkyl moiety with from 2 to 12 carbon atoms.

189. (New) The mesogens of claim 188 wherein said alkyl moiety consists essentially of from 2 to 12 carbon atoms and CH_2 groups optionally are substituted by groups selected from the group consisting of oxygen, sulfur, and ester groups; provided that two or more carbon atoms separate said oxygen from said ester groups.

190. (New) The mesogens of claim 189 wherein said alkyl moiety consists

essentially of a total of from 2 to 9 carbon atoms.

191. (New) The mesogens of claim 189 wherein said alkyl moiety consists essentially of a total of from 2 to 6 carbon atoms.

192. (New) The mesogens of claim 186 wherein R and R^3 are selected from the group consisting of hydrogen and a methyl group.

193. (New) The mesogens of claim 191 wherein R and R^3 are selected from the group consisting of hydrogen and a methyl group.

194. (New) The mesogens of claim 186 wherein one or more member selected from the group consisting of X and Y further consists essentially of spacer group.

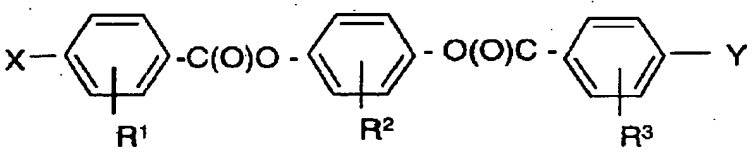
195. (New) The mesogens of claim 187 wherein one or more member selected from the group consisting of X and Y further consists essentially of spacer group.

196. (New) The mesogens of claim 186 wherein one or more member selected from the group consisting of X and Y is cinnamoyloxy group.

197. (New) The mesogens of claim 194 wherein one or more member selected from the group consisting of X and Y is cinnamoyloxy group.

198. (New) The mesogens of claim 195 wherein one or more member selected from the group consisting of X and Y is cinnamoyloxy group.

199. (New) Mesogens having the following formula:



wherein

X is polymerizable group comprising polymerizable unsaturated carbon-carbon bond;

Y comprises amino group;

R^2 is selected from the group consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups; and

R^1 and R^3 are selected from groups less bulky than R^2.

200. (New) The mesogens of claim 199 wherein said polymerizable group is selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy alkoxy groups having alkyl moiety with from 2 to 12 carbon atoms.

201. (New) The mesogens of claim 200 wherein said alkyl moiety consists essentially of from 2 to 12 carbon atoms and CH_2 groups optionally are substituted by groups selected from the group consisting of oxygen, sulfur, and ester groups; provided that two or more carbon atoms separate said oxygen from said ester groups.

202. (New) The mesogens of claim 201 wherein said alkyl moiety consists essentially of a total of from 2 to 9 carbon atoms.

203. (New) The mesogens of claim 201 wherein said alkyl moiety consists essentially of a total of from 2 to 6 carbon atoms.

204. (New) The mesogens of claim 199 wherein R and R^3 are selected from the group consisting of hydrogen and a methyl group.

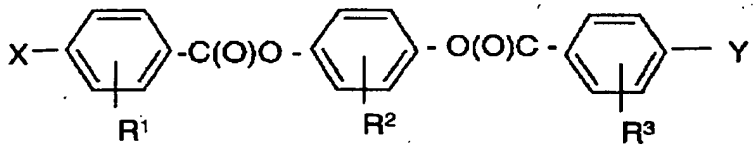
205. (New) The mesogens of claim 201 wherein R and R^3 are selected from the group consisting of hydrogen and a methyl group.

206. (New) The mesogens of claim 199 wherein one or more member selected from the group consisting of X and Y further consists essentially of spacer group.

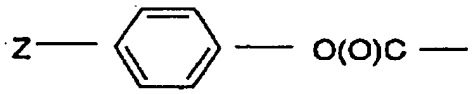
207. (New) The mesogens of claim 201 wherein one or more member selected from the group consisting of X and Y further consists essentially of spacer group.

208. (New) The mesogens of claim 204 wherein one or more member selected from the group consisting of X comprises cinnamoyloxy group.

209. (New) Mesogens having the following formula:



wherein X and Y independently are selected from the group consisting of spacer groups, polymerizable groups, and combinations thereof, one or more member selected from the group consisting of X and Y having the following structure:



wherein Z is selected from the group consisting of spacer groups, terminal functionalities, polymerizable groups, and combinations thereof, said spacer groups being selected from the group consisting of $H-(CH_2)_n-O-$ groups, $Cl(CH_2)_n-O-$ groups, $Br(CH_2)_n-O-$ groups, $I(CH_2)_n-O-$, wherein n is from about 2 to about 12 wherein the CH_2 groups independently can be substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms separate said oxygen or said ester group;

R^2 is selected from the group consisting of alkyl groups having from about 1 to 6 carbon atoms and aryl groups; and

R^1 and R^3 are selected from groups less bulky than R^2.

210. (New) The mesogens of claim 209 wherein X and Y further consist essentially of functionalities independently selected from the group consisting of hydroxyl groups, amino groups, and sulfhydryl groups.

211. (New) The mesogens of claim 210 wherein n is from about 2 to 9.

212. (New) The mesogens of claim 210 wherein n is from 2 to 6.

213. (New) The mesogens of claim 209 wherein said polymerizable groups have alkyl moiety having polymerizable unsaturated carbon-carbon bond.

214. (New) The mesogens of claim 210 wherein said polymerizable groups have alkyl moiety having polymerizable unsaturated carbon-carbon bond.

215. (New) The mesogens of claim 214 wherein said alkyl moiety has from 2 to 9 carbon atoms.

216. (New) The mesogens of claim 214 wherein said alkyl moiety has from from 2 to 6 carbon atoms.

217. (New) The mesogens of claim 209 wherein R^2 is selected from the group consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

218. (New) The mesogens of claim 210 wherein R^2 is selected from the group consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

219. (New) The mesogens of claim 213 wherein R^2 is selected from the group consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

220. (New) The mesogens of claim 214 wherein R^2 is selected from the group consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

221. (New) The mesogens of claim 216 wherein R^2 is selected from the group consisting of methyl groups, t-butyl groups, isopropyl groups, secondary butyl groups, and phenyl groups.

222. (New) The mesogens of claim 209 wherein R and R^3 are selected from the group consisting of hydrogen and methyl group.

223. (New) The mesogens of claim 217 wherein R and R^3 are selected from the group consisting of hydrogen and methyl group.

224. (New) The mesogens of claim 220 wherein R and R^3 are selected from the group consisting of hydrogen and methyl group.

225. (New) The mesogens of claim 221 wherein R and R^3 are selected from the group consisting of hydrogen and methyl group.

226. (New) The mesogens of claim 209 wherein one or more member selected from the group consisting of X and Y is cinnamoyloxy group.

227. (New) The mesogens of claim 217 wherein one or more member selected from the group consisting of X and Y is cinnamoyloxy group.

228. (New) The mesogens of claim 222 wherein one or more member selected from the group consisting of X and Y is cinnamoyloxy group.